

## REMARKS/ARGUMENTS

### **Rejections under 35 U.S.C. § 103**

On page 2 of the Office Action, the Examiner has also rejected claims 1-13 under 35 U.S.C. § 103(a) as being unpatentable over Rickard et al. (6,016,483).

The Examiner's §103 rejection of claims 1-13 as obvious over the sole Rickard et al. reference should be withdrawn as the rejection set forth in the Action fails to demonstrate that the cited Rickard et al. reference teaches or suggests all of the elements of claims 1-13. Further, Applicants believe that the Action fails to provide the statutory required motivation providing for one of ordinary skill in the art to modify the Rickard et al. reference to include all the features of the method of opening options trading as defined in claims 1-13.

Applicants also respectfully traverse the rejections. Applicants respectfully submit that the combination of this reference with the knowledge of one of ordinary skill in the art at the time of the invention is not proper, as the reference does not provide a motivation to combine them. Even if properly combined, the combination does not render the claims obvious. At the outset, there is no motivation within the reference to combine them. Rickard et al. discloses a computer-based system for determining a set of opening prices for a number of series of options traded on an options exchange and for allocating public order imbalances at the opening of trading. Specifically, this system allows for first and second stages that are *independent* of one another, with either stage capable of implementation without the other, the second stage for assigning any residual imbalance of non-executed public orders to market makers so as to minimize a

cumulative measure of deviation between the desired target position and the current position of each market maker.

The Examiner states that it would be obvious to take the method and apparatus for automated opening of Rickard et al. with what the Examiner deems to be “well known in the art” to arrive at Applicants’ invention (Office Action, page 3). However, there is no motivation to seek an improvement in the method and apparatus for automated opening of Rickard et al., which discloses first and second stages that are independent of one another, with the second stage for assigning any residual imbalance of non-executed public orders to market makers.

In particular, as noted by the Examiner, Rickard et al. fails to teach or disclose “randomly terminating the second time period prior to an opening rotation period such that additional quotes and orders are not considered in updating the opening prices” (of claim 1, as amended) and “randomly terminating the second time period prior to open trading of the plurality of option series” (of claim 8, as amended). Additionally, Rickard et al. fails to teach or disclose “receiving additional quotes and orders associated with the option class during a second time period *and responsively updating the opening prices prior to the opening of trading.*” Thus, there is no motivation to combine the method and apparatus for automated opening of Rickard et al. with a random termination of a second pre-opening time period such that additional quotes and orders are not considered in updating the opening prices, as the combination would result in an automated opening method and apparatus that is contrary to the disclosure of Rickard et al. to have first and second stages that are independent of one another, with either stage capable of implementation without the other. Additionally, the combination suggested by the

Examiner would result in an automated opening apparatus and method that incorporates a randomly terminating *opening period* (Office Action, pages 3 and 5), and not a randomly terminating second pre-opening period (202) prior to the opening rotation period (204). Therefore, these references teach away from combining them.

Further, Applicants submit that the method and apparatus for automated opening of Rickard et al. would result in an automated opening that lacks independent first and second stages and a controller that picks opening prices that are the output of the first stage (implied volatilities) for each series in favor of Applicants' dependent first and second pre-opening time periods (200) and (202) and responsively updating the opening prices generated at the first stage based on additional quotes and orders received during a randomly terminating second stage. Therefore, Rickard et al. fails to provide an enabling disclosure for dependent first and second pre-opening time periods and responsively updating the opening prices and does not provide sufficient disclosure for randomly terminating the second pre-opening time period such that additional quotes and orders are not considered in updating the opening prices prior to the opening rotation (204).

Applicants' invention, and specifically the combined use of dependent first and second pre-opening time periods and responsively updating the opening prices prior to the opening rotation (204) with the step of randomly terminating the second pre-opening time period such that additional quotes and orders are not considered in updating the opening prices prior to the opening rotation, shows a dramatically improved randomized opening procedure when compared with the automated opening disclosed in Rickard et al.

Furthermore, if this reference were properly combinable with the knowledge of

one of ordinary skill in the art at the time the invention, it is not believed that the claimed invention would be/could be rendered obvious. Specifically, this reference and the reasons given by the Examiner for the combination with the knowledge of one of ordinary skill in the art is submitted not to result in what is required by the Applicant's claims, namely, "receiving additional quotes and orders associated with the option class during a second time period and responsively updating the opening prices prior to the opening of trading" and "randomly terminating the second time period prior to an opening rotation period such that additional quotes and orders are not considered in updating the opening prices" (claim 1, as amended) or "randomly terminating the second time period prior to open trading of the plurality of option series" (claim 8, as amended).

This combination also does not teach or suggest an automated opening apparatus and method expressly or inherently having the claimed requirements of Applicants' randomized opening procedure. It is advantageous to provide a randomized opening procedure that includes the steps of "randomly terminating the second time period prior to an opening rotation period such that additional quotes and orders are not considered in updating the opening prices" and "receiving additional quotes and orders associated with the option class during a second time period and responsively updating the opening prices prior to the opening of trading." One advantage to using the randomized opening procedure of the present invention is that the opening price is not subject to manipulation as a result of a misrepresentation of the supply, demand or underlying depth of the market. (Page 10, lines 6-7).

Contrary to the Examiner's assertion that Rickard et al., in combination with what the Examiner deems as "well known in the art," would result in Applicants' invention,

Applicants' contend that such a combination would not result in an automated opening apparatus or method, such as that of Applicants' invention, that includes a first pre-opening period (200), a randomly terminating second pre-opening period (202), and an opening rotation period (204). The position of the Examiner is that "randomly terminating the *opening period* is well known in the art." (Office Action, pages 3 and 5, emphasis added). However, Applicants note that randomly terminating the opening period is not the same as randomly terminating a second pre-opening period (202). The automated opening apparatus and method of Rickard et al. could not be used to provide a randomly terminating second pre-opening period (202) that is dependent upon the first pre-opening period (200), and subsequent "responsively updating the opening prices prior to the opening of trading," resulting from the use of both the steps of "receiving additional quotes and orders associated with the option class during a second time period and responsively updating the opening prices prior to the opening of trading" and "randomly terminating the second time period prior to an opening rotation period such that additional quotes and orders are not considered in updating the opening prices." Thus the automated opening apparatus and method of Rickard et al. is unsuitable.

The Examiner has failed to establish a prima facie case for obviousness of claims 1-13. It is the Examiner's burden to show that the prior art relied upon coupled with the knowledge generally available in the art at the time of the invention must contain a suggestion or incentive that would have motivated one of ordinary skill in the art to combine references. As Applicants have set forth throughout this response, the distinctive differences between the sole reference and what the Examiner deems to be well known in the art makes the this combination implausible. The Examiner must also

show that the proposed combination must have a reasonable expectation of success. It is inappropriate for the Examiner to use the present application as a motivation to combine the references. This inappropriate combination, taking bits and pieces from each reference in an attempt to create Applicants' invention, is exactly what the Examiner has done with these references.

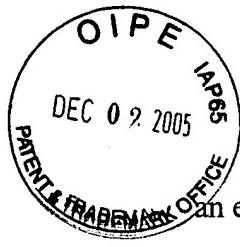
Therefore, since Rickard et al., in view of what the Examiner deems to be "well known in the art," fails to teach or disclose a randomized opening procedure, including the steps of "receiving additional quotes and orders associated with the option class during a second time period and responsively updating the opening prices prior to the opening of trading" and "randomly terminating the second time period prior to an opening rotation period such that additional quotes and orders are not considered in updating the opening prices," or "randomly terminating the second time period prior to open trading of the plurality of option series," Applicants respectfully submit it does not anticipate or render obvious any of the pending claims.

The Applicant respectfully submits that claims 2-7 and 9-13 are allowable for the same reasons as given with respect to claims 1 and 8. As claims 2-7 and 9-13 are dependent on claims 1 and 8, respectively, Applicant respectfully submits that these claims are allowable for the same reasons as given with respect to claims 1 and 8.

Thus, Applicants respectfully request reconsideration and withdrawal of the § 103 rejection as to claims 1-13.

### **Conclusion**

Having analyzed the rejections cited against the claims, it is urged that the present claims are in condition for allowance. A favorable reconsideration is requested.



In view of the aforesaid, it is also respectfully requested that Applicants receive an early Notice of Allowance.

Should any further minor objections arise or need to be attended to, the Examiner is invited to contact the undersigned attorney to discuss the matters in an effort to successfully complete the prosecution of this application.

Respectfully submitted,

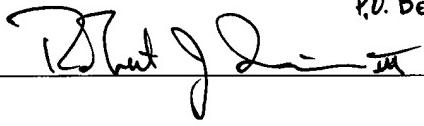
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